Page 1

October 2, 2009 8:16:17 AM

Required Date: 10/06/2009

Item ID:

Revision ID:

D2003-103

Tube Assembly

Accept



Setup Start



Stop

Item Name: **Start Date:**

В

10/02/2009 **Start Oty: 10.00**



Cust Item ID: Customer:

Draw

Number

Reference:

Approvals:

Sequence ID/

Operation

Description

Reg'd Qty: 10.00

Process Plan: _____ Date: 09-10-02 Tooling:

Date:

Run

Start

Stop



QC: _____ Date: _____ SPC (Y/N):

Date: ____

Draw

Rev.

Accept Plan Code **Qty**

Reject Reject Qty

Insp. Number Stamp

Work Center ID **Draw Nbr**

Revision Nbr

D2003 Rev U/R

100

Small Fab

Small Fab

Small Fab

Memo

template D2003-103T2

0.00

Set Up/

Run Hours

Memo
Cut 12.38" long Heat sleeve as per Dwg D2003 & heat shrink□Form tube as per

110

QC

OC5- Inspect part completeness to step on W/O

Quality Control

120

Small Fab

Small Fab

Small Fab

Memo

Memo

0.00

Assemble as per Dwg D2003 Install Red decal and heat shrink as per PPP

D2003-103

M-f 04/10/06



Dart Aerospace Ltd WORK ORDER CHANGES W/O: **Approval Approval** DATE STEP PROCEDURE CHANGE By Qtv Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ____ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____ WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B **Description of NC** Verification **Approval** Approval **STEP** DATE Sign & **Action Description** Initial QC Inspector Section A Section C Chief Eng Chief Eng Chief Eng Date

October 2, 2009 8:16:17 AM

Item ID:

D2003-103

В

Revision ID: Item Name:

Tube Assembly

Start Date:

10/02/2009

Start Oty: 10.00

Req'd Qty: 10.00 **Required Date:** 10/06/2009



Accept

Cust Item ID:

Customer:

Setup Start

Stop



Reference:

Approvals:

Process Plan:

Date:

Date: **Tooling:**

SPC (Y/N):

Date: ____

Run

Start



Stop

Sequence ID/ Work Center ID

130

Quality Control

Operation Description

.QC5- Inspect part completeness to step on W/O

Memo

Memo

Memo

Set Up/ **Run Hours**

Draw Number

Draw Rev.

Date:

Plan Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

140

Packaging

Packaging

Identify as per dwg & Stock Location: \$\frac{193}{2}\$

UMD 09/10/08

0.00

X10 ____

150

Quality Control

QC21- Final Inspection - Work Order Release

0.00

0.00

Dart Aerospace Ltd W/O: WORK ORDER CHANGES **Approval Approval** DATE STEP **PROCEDURE CHANGE** Ву Qty Chief Eng / Date QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)										
		Description of NC		Corrective Action Section B	Verification	Approval	Approval					
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector				
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		• •										
				٠.								

Picklist Print

October 2, 2009 8:42:41 AM

Work Order ID: 52576

Parent Item:

D2003-103RevB

Parent Item Name: Tube Assembly

Comments:



Required Date: 10/06/2009

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
Item Name	Item ID	Purch	Item	Location	Location	Seq ID	Measure	Hand	Qty To Pick	Issued	Issued	
AN818-6D		Purchased	No				Each	44.0000	2.0000			

Nut

Warehouse		Loc Qty	Loc Code
Location			
Main Warehous	e		
ST		. 44	
10315		2	
10775		4	
11200	2	20	

112082 ✔ 38

0.0000

1.0000

58.7016 1.0312

D2182-045RevC Manufactured

Heat Shrink 4.5" Long

M2650-6

Purchased

Firesleeve-crkl .375IDia

Warehouse Loc Qty Loc Code

Location Main Warehouse

112195

ST

No

No

58.70156221

58.7015622

Each

f

Mrh 0 al 10/00 MH2195

Dart A	\erospa	ace Ltd
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	-										
W/O:			WORK ORDER CHANGES								
DATE	STEP	PRO	CEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
									'		
Part No	•	PAR #:	Fault Category: NCR: Yes No DQA: I								
	R	esolution:	Dispositio	n:	QA: N/C CI	osed:		Date:			
NCR:		\	WORK ORD	ER NON-CONFORMA	NCE (NCF	l)					
DATE	STEP	Description of NC		n B	Verific	ation	Approval	Approval			
DATE	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	Section C		Chief Eng	QC Inspector		
į											

October 2, 2009 8:42:41 AM

Work Order ID: 52576

Parent Item:

D2003-103RevB

Parent Item Name: Tube Assembly

Comments:



Start Date: 10/02/2009

Required Date: 10/06/2009

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name

Item ID

Replacement Mfg/ Purch Bin Primary Item Location

Last Location Route Seq ID Unit of Measure

f

Qty on Hand

Remaining Qty Qty To Pick Issued Date

Status

M6061T6T0.375W.035

Purchased

Purchased

No

No

Loc Code

282.9673 1.0500

2.0000

Issued

6061-T6 RD Tube .375 x.035W

Warehouse Location

Main Warehouse

MAT

104913 112652

Loc Qty

282.9673149 78.9673149 204

44.0000

M/L 09/10/06 M104913

Sleeve

MS20819-6D

Warehouse

Loc Qty

Loc Code

Each

Location Main Warehouse

ST

112082

44 44

Dart Aerospace Ltd	Dart	Aeros	pace	Ltd
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W/O:		WORK ORDER O	WORK ORDER CHANGES									
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector					
Part No	•	PAR #: Fault Category:	NCR: Yes	No DQ	A:	_ Date: _						

Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)											
		Description of NC		Corrective Action Section B	Verification	Ammuousi	A						
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector					
						E.							





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	CHEC	KEP	APPROVED	DRAWING NO. REV. B
	4	15	1 47	D2003 SHEET 1 OF 2
	DATE	,		TITLE SCALE
_	99.0	06.08		206 CABIN HEATER TUBE ASSEMBLIES NTS
	Α		90.04.09	NEW ISSUE
	В		99.06.08	UPDATE PER TEMPLATES; ADD P/N'S;



UNDER REVIEW some Flot

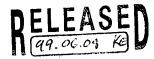
P/N	TEMPLATE	HEATSLEEVE LENGTH ¹	CUT LENGTH OF TUBE ²	MS20819-8J SLEEVE	AN818-8J NUT	MS20819-8D SLEEVE	AN818-8D NUT	MS20819-6D SLEEVE	AN818-6D NUT	DESC.	MATERIAL ⁴⁸⁷	VENDOR OR SPEC
D2003-001	T2003-001	5.2	6.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-003	T2003-003	7.3	8.12					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-005	T2003-005	9.8	10.62				-	2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-007	T2003-007	20.0	19.63					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-009	T2003-009	12,38	12.44					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-011	T2003-011	33,31	32.38					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-013	T2003-013	12.7	13.54					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-015	T2003-015	17.2	18.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-017	T2003-017	17.0	16.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-019	T2003-019	9.8	10.62			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-021	T2003-021	N/A	2.25			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-023	T2003-023	4.5	5.33			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-025	T2003-025	9.8	10.60			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-027	T2003-027	7.25	7.38			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-029	T2003-029	17.2	18.00			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-031	T2003-031	14.6	15.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-033	T2003-033	29.75	29.62	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-035	T2003-035	24.7	27.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-037	T2003-037	24.81	23.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-039	T2003-039	34.0	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-041	T2003-041	6.0	5.88	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-043	T2003-043	11.7	10.75	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-045	T2003-045	3.50	2.44	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-047	T2003-047	5.56	5.56	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-049	T2003-049	33.2	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-077	T2003-077	N/A	6.25	7				1	1	JET	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-101	T2003-101	13.25	13.13					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-103	T2003-103	12.38	12.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-105	T2003-105	10.75	10.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-107	T2003-107	12.75	12.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-109	T2003-109	8.25	8.125			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-111	T2003-111	4.75	4.625			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-116	T2003-116	4.0								HEATSLEEVE	M2650-20 CRINKLE-SOFT	STRATOFLEX
D2003-120	T2003-120	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-14	T2003-14	4.0								HEATSLEEVE	M2650-14 CRINKLE-SOFT	STRATOFLEX
D2003-16	T2003-16	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-205	T2003-205	9.75	9.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-207	T2003-207	3.75	3.75					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6

W/O:		WORK ORDER CHANGES													
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector					
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Part No	:	PAR #:	PAR #: Fault Category: N						NCR: Yes No DQA: Date:						
	Re	esolution:	Dispositio	n:	_ QA: N/	Clos	sed:		Date: _						
NCR:			WORK ORD	ER NON-CONFORMA	ANCE (N	CR)									
DATE	STEP	Description of NC		on B		Verific	ation	Approval	Approval						
DATE	SILF	Section A	Initial Chief Eng	Action Description Chief Eng			Sign & Section C		Chief Eng	QC Inspector					
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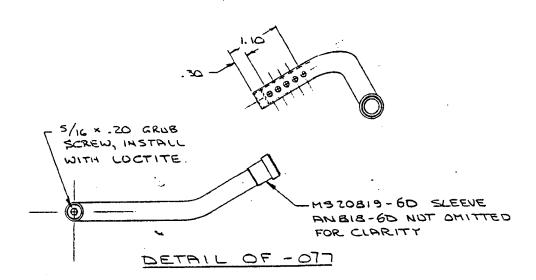
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DESIGN	DRAWN BY	• • • • • • •	ROSPACE LTD y, ontario, canada	
CHECKED	APPROVED	DRAWING NO.		REV. B
1	14	D2003	SHEET	2 OF 2
DATE		TITLE		SCALE
99.06.08		206 CABIN HEATE	R TUBE ASSEMBLI	ES NTS



Ob. 08.21 (B) Some Flat Tength.

Notes:

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (WW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



W/O:	·		V	ORK ORDER CHANG	iES					
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
	-									
Part No:PAR		PAR #:	Fault Ca	_ NCR: Yes	NCR: Yes No DQA: Date:					
Resolution:			Disposit	ion:	_ QA: N/C C	QA: N/C Closed:			_ Date:	
NCR:		,	WORK OR	DER NON-CONFORM	ANCE (NCF	₹)				
DATE	STEP	Description of NC Section A		Corrective Action Section B		Verifica		ation Approval	Approval	
			Initial Chief Eng	Action Description Chief Eng	Sign 8 Date		on C	Chief Eng	QC Inspector	
			('		1			1	Ī	